Practical 1: Android Studio setup for Flutter development with along with Dart SDK.

Solution:

Step 1: Installing a Flutter.

i. System Requirements:

- Assure that your system meets the minimum requirements. Flutter supports macOS, Linux, and Windows.
- On macOS, you need Xcode with the command-line tools installed.
- On Linux, you need to have git, lib32stdc++6, and other dependencies installed.

ii. Download Flutter:

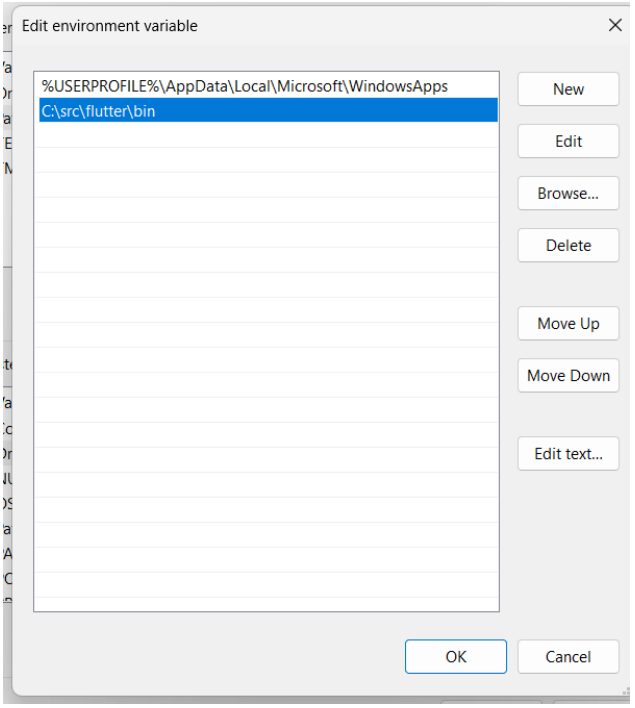
- Visit Flutter Website for Installation of Flutter -> **https://docs.flutter.dev/get-started/install**.

iii. Extract Flutter:

- If you downloaded the ZIP file, extract it to a location on your machine. **(C:\src\flutter)**.

iv. Set Up Environment Variables:

- Add the **C:\src\flutter\bin** directory to your system's PATH variable.



v. Run flutter doctor:

- Open a terminal and run the following command: flutter doctor
- This command checks your environment and displays a report of any missing dependencies or issues.

vi. Install Flutter Dependencies:

- Follow the instructions provided by flutter doctor to install any missing dependencies. This may include things like Android Studio, Xcode command-line tools, etc.

Step 2: Installing Android Studio.

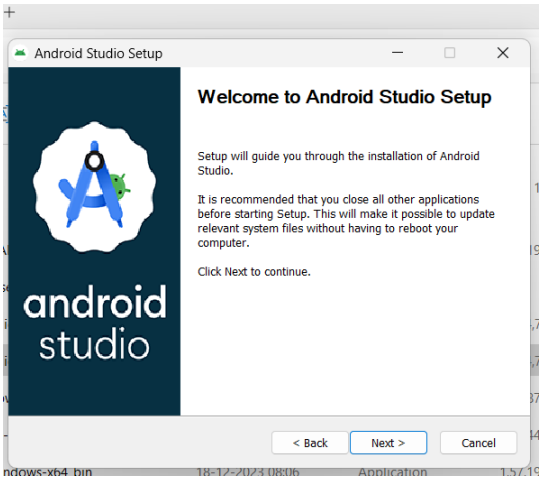
i. Download Android Studio:

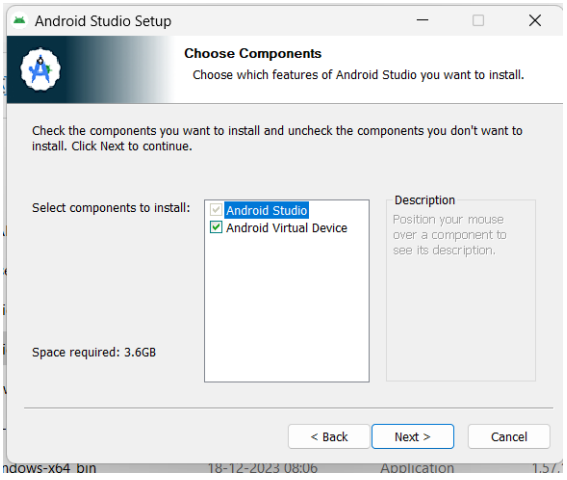
- Visit the Android Studio download page.
- Click on the "Download" button and download the Windows version.

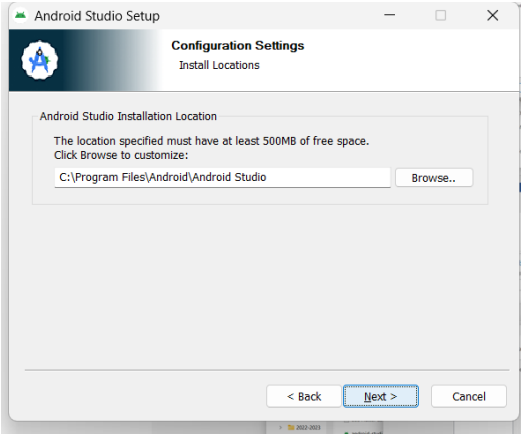
ii. Run the Installer:

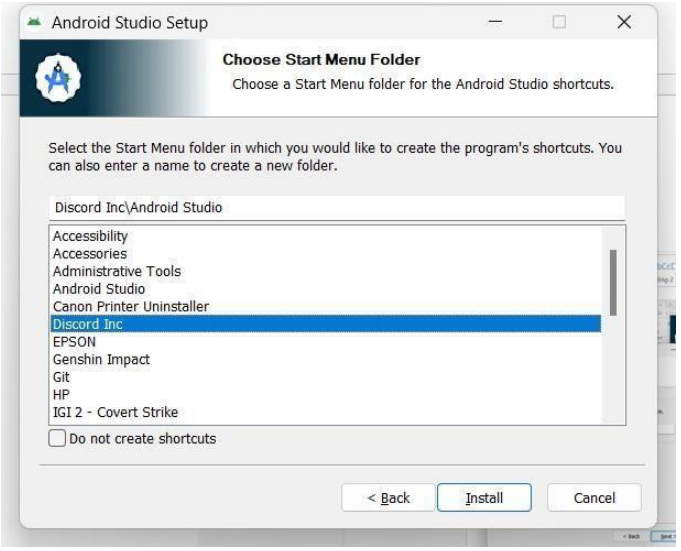
- Once the download is complete, run the installer executable (.exe) file.

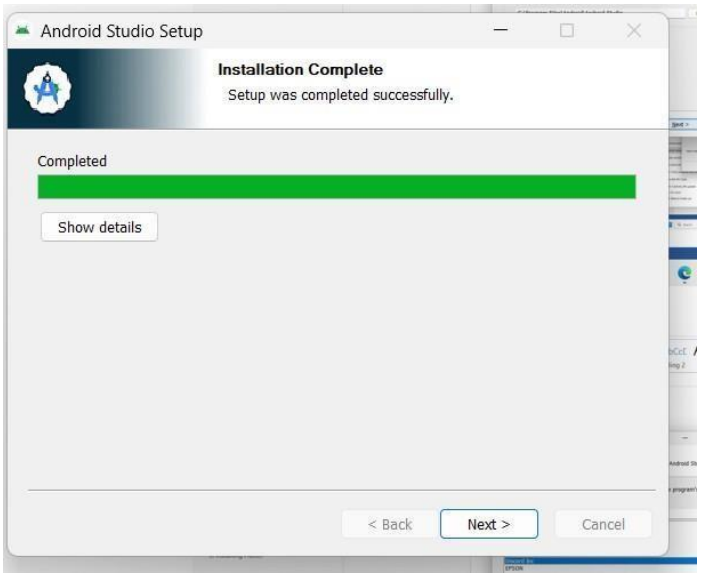
iii. Follow Installation Wizard:

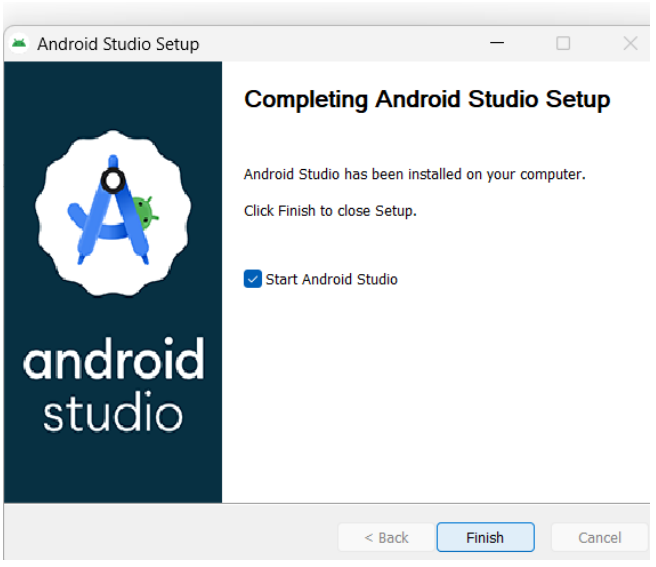




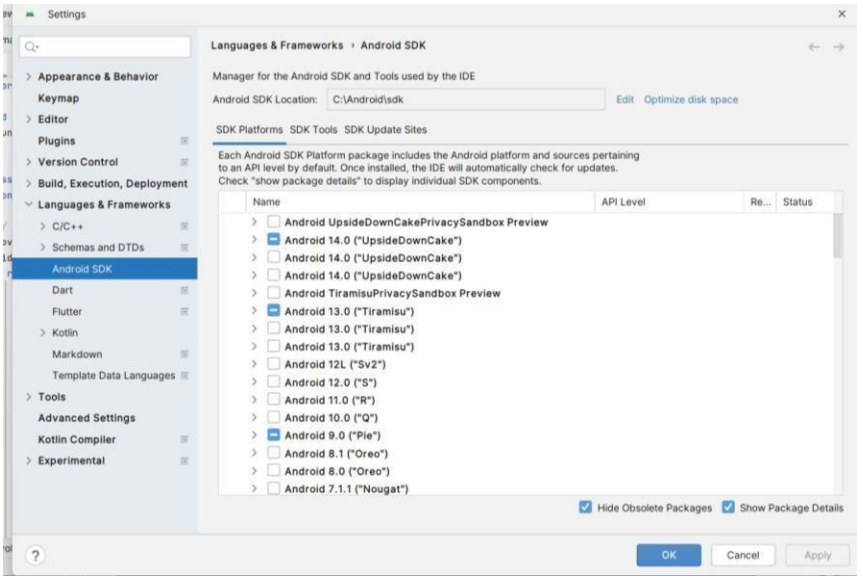



Android Studio Setup
Choose Start Menu Folder
Choose a Start Menu folder for the Android Studio shortcuts.
Select the Start Menu folder in which you would like to create the program's shortcuts. You can also enter a name to create a new folder.
Discord Inc\Android Studio
Accessibility
Accessories
Administrative Tools
Android Studio
Canon Printer Uninstaller
Discord Inc
EPSON
Genshin Impact
Git
HP
IGI 2 - Covert Strike
Do not create shortcuts
< Back
Install
Cancel

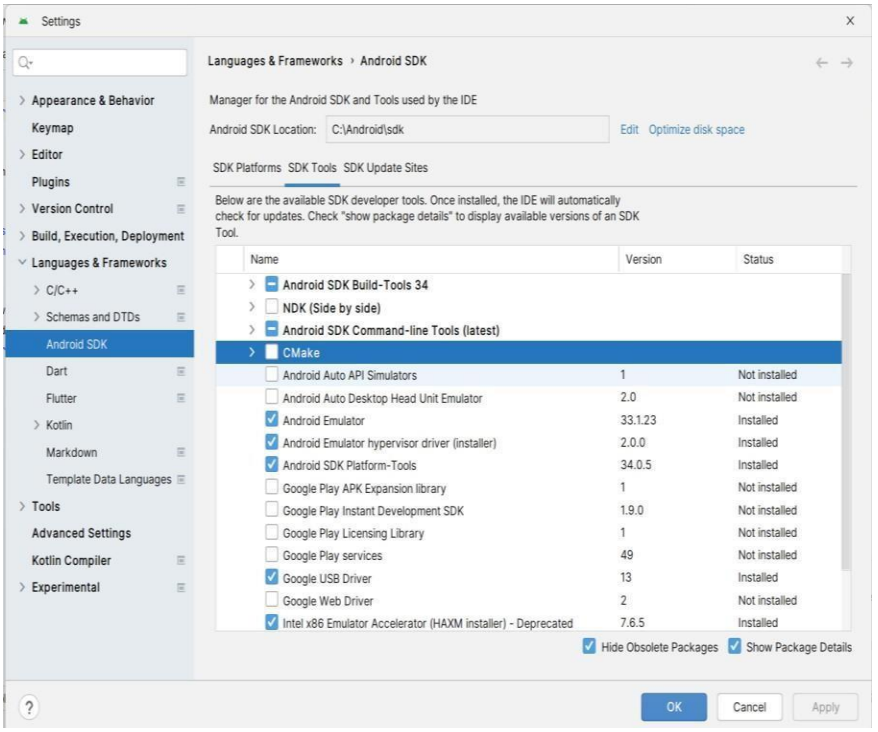

Android Studio Setup
Installation Complete
Setup was completed successfully.
Completed
Show details
< Back
Next >
Cancel


Android Studio Setup
android studio
Completing Android Studio Setup
Android Studio has been installed on your computer.
Click Finish to close Setup.
Start Android Studio
< Back
Finish
Cancel

- **Android SDK Platforms**:



- **Android SDK Tools:**



Step 3: Run Following Command for checking Flutter dependencies on after installation of android.

iv. Accept Android Licenses

- Flutter doctor --android-licenses to develop for Android, you need to accept the Android licenses.
- Run the following command: **flutter doctor --android-licenses**

Practical 2: Create a "Hello Flutter" application. Main.dart:

```
import 'package:flutter/material.dart';

void main() {
runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({super.key});

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      theme: ThemeData(
      ),
      home: const MyHomePage(title: 'My Intro using Flutter App'),
    );
  }
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({super.key, required this.title});

  final String title;

  @override
  State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {

  @override
  Widget build(BuildContext context) {

    return Scaffold(
      appBar: AppBar(

        backgroundColor: Theme.of(context).colorScheme.inversePrimary,
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            //Image.asset("assets/images/deskt.png", height: 350, width: 350),
            const Text(
              'Name : - Nandan Bhimani',
              style: TextStyle(color: Colors.orange, fontSize: 18),
            ),
            const Text(
              '\nEnrollment No : - 92210103018',
              style: TextStyle(color: Colors.blue, fontSize: 18),
            ),
            const Text(
```

```
            '\n Class : 6TC3 - C',
            style: TextStyle(color: Colors.green, fontSize: 18),
          ),
          const Text(
            '\n University : - Marwadi University',
            style: TextStyle(color: Colors.red, fontSize: 18),
          ),
        ],
      ),
    ),
  );
 }
}
```

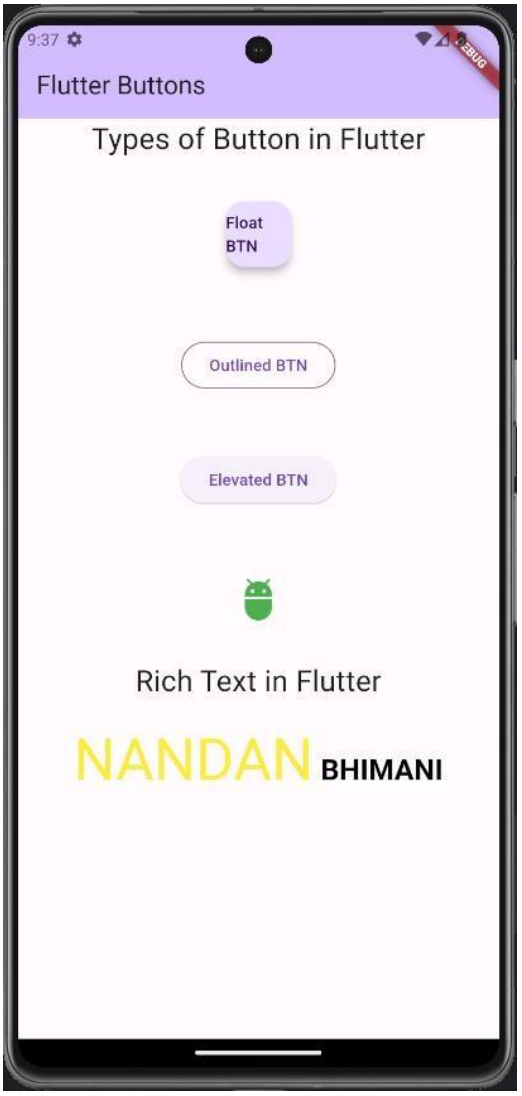
Output:

Practical 3: Create and application using Flutter Key Widgets:

```
import 'package:flutter/material.dart';

void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({super.key});

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      theme: ThemeData(
        colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
        useMaterial3: true,
      ),
      home: const MyHomePage(title: 'Flutter Buttons'),
    );
  }
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({super.key, required this.title});

  final String title;

  @override
  State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        backgroundColor: Theme.of(context).colorScheme.inversePrimary,
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(children: <Widget>[
          Text('Types of Button in Flutter',style: TextStyle(fontSize: 25),),
          Container(
            margin: EdgeInsets.all(35),
            child: FloatingActionButton(
            child: Text(
                'Float BTN',
              ),onPressed: () {},
            ),
        ),
      Container(
        margin: EdgeInsets.all(25),
        child: OutlinedButton(
```

```
          child: Text(
            'Outlined BTN'
          ),onPressed: () {},
        ),
      ),
      Container(
        margin: EdgeInsets.all(25),
        child: ElevatedButton(
        onPressed: () {  },
          child: Text(
            'Elevated BTN'
          ),
        ),
      ),
          Container(
            margin: EdgeInsets.all(25),
            child: IconButton(onPressed: () {
            },
              icon: Icon(Icons.adb),
              iconSize: 40,
              color: Colors.green,
            ),
          ),
          Text('Rich Text in Flutter', style: TextStyle(fontSize: 25),),
          Container(
            padding: EdgeInsets.all(20),
            child: RichText(
              text: const TextSpan(
                  text: "NANDAN",
                  style: TextStyle(
                    color: Colors.yellow,
                    fontSize: 50,
                  ),
                  children: [
                    TextSpan(
                      text: ' BHIMANI',
                      style: TextStyle(
                        fontWeight: FontWeight.bold,
                        color: Colors.black,
                        fontSize: 25,
                      ),
                    )
                  ]
              ),
            ),
          ),
          ],
        ),
      ),
    );
  }
};
```

Output:


9:37
DEBUG
Flutter Buttons
Types of Button in Flutter
Float BTN
Outlined BTN
Elevated BTN
Rich Text in Flutter
NANDAN BHIMANI

Practical 4: Create and application using Flutter Key Widgets:

```
import 'package:flutter/material.dart';

void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({super.key});
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter P3',
      theme: ThemeData(

        colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
        useMaterial3: true,
      ),
      home: const MyHomePage(title: 'Flutter Row and Column'),
    );
  }
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({super.key, required this.title});

  final String title;

  @override
  State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        backgroundColor: Theme.of(context).colorScheme.inversePrimary,
        title: Text(widget.title),
      ),
      body: Column(
        children: <Widget>[
          Text('Row',style: TextStyle(fontSize: 25),),
          Center(
            child: Row(
              mainAxisAlignment: MainAxisAlignment.spaceEvenly,
              children: <Widget>[
                Container(
                  margin: EdgeInsets.all(12.0),
                  padding:  EdgeInsets.all(8.0),
                  decoration:BoxDecoration(
                      borderRadius:BorderRadius.circular(8),
                      color:Colors.lightBlue
                  ),
                  child: Text(
```

```
            'Flutter',
            style: TextStyle(
              color: Colors.red,
              fontSize: 20
            ),
          ),
        ),
        Container(
          margin: EdgeInsets.all(15.0),
          padding:  EdgeInsets.all(8.0),
          decoration:BoxDecoration(
            borderRadius:BorderRadius.circular(8),
            color:Colors.green
          ),
          child: Text("Android",style: TextStyle(color:Colors.orange,fontSize:25),),
        ),
        Container(
          margin: EdgeInsets.all(12.0),
          padding:  EdgeInsets.all(8.0),
          decoration:BoxDecoration(
            borderRadius:BorderRadius.circular(8),
            color:Colors.yellow
          ),
          child: Text("Firebase",style: TextStyle(color:Colors.blue,fontSize:25),),
        )
      ],
    ),
  ),
  Column(
    children: <Widget>[
      Text('Column',style: TextStyle(fontSize: 25),),
      Container(
        margin: EdgeInsets.all(20.0),
        padding: EdgeInsets.all(12.0),
        decoration: BoxDecoration(
          borderRadius: BorderRadius.circular(8),
          color: Colors.red,
        ),
        child: Text(
          "React.js",
          style: TextStyle(color: Colors.yellowAccent, fontSize: 20),
        ),
      ),
      Container(
        margin: EdgeInsets.all(20.0),
        padding: EdgeInsets.all(12.0),
        decoration: BoxDecoration(
          borderRadius: BorderRadius.circular(8),
          color: Colors.red,
        ),
        child: Text(
          "Flutter",
          style: TextStyle(color: Colors.yellowAccent, fontSize: 20),
        ),
      ),
      Container(
```

```
                margin: EdgeInsets.all(20.0),
                padding: EdgeInsets.all(12.0),
                decoration: BoxDecoration(
                  borderRadius: BorderRadius.circular(8),
                  color: Colors.red,
                ),
                child: Text(
                  "MySQL",
                  style: TextStyle(color: Colors.yellowAccent, fontSize: 20),
                ),
              ),
            ],
          ),
        ],
      ),
    );
  }
}
```

Output:

Practical 5: Create and application with Flutter UI Components.

main.dart:

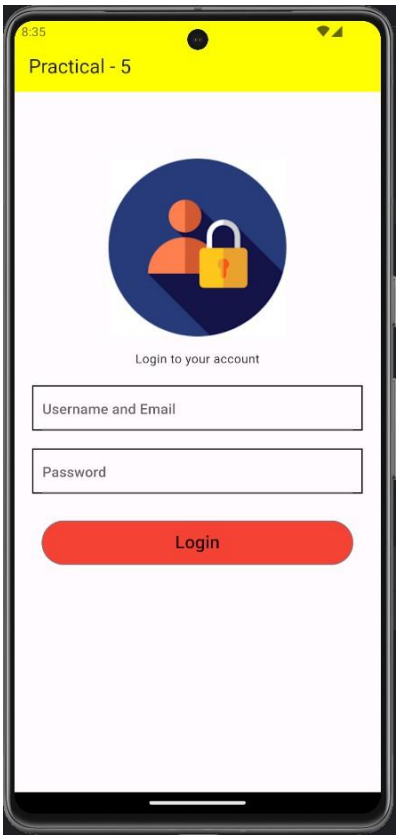
```
import 'package:flutter/material.dart';
import 'login.dart';

void main() {
 runApp(MaterialApp(
  debugShowCheckedModeBanner: false,
  home:Scaffold(
   appBar: AppBar(
    title: const Text("Practical - 5"),
    backgroundColor: Colors.yellowAccent,
    foregroundColor: Colors.black87,
   ),

   body: const LoginPage(),
  ),
 ),
 );
}
```

login.dart:

```
import 'package:flutter/material.dart';

class LoginPage extends StatelessWidget {
 const LoginPage ({super.key});

 @override
 Widget build(BuildContext context) {
  return SingleChildScrollView(
  child: Column(
     children: [
      const SizedBox(height: 75,),
      Container(
       height: 200,
       width: 250,
       child: Image.asset("assets/images/login.png"),
      ),
      const SizedBox(height: 15,),
      const Text("Login to your account",),
      const SizedBox(height: 20),
      Container(
       margin: const EdgeInsets.symmetric(horizontal: 20),
       padding: const EdgeInsets.symmetric(horizontal: 10),
       decoration: BoxDecoration(
        border: Border.all(color: Colors.black, width: 1.5),
      ),
       child: const TextField(
        decoration: InputDecoration(
         hintText: "Username and Email",
        ),
        spellCheckConfiguration:  SpellCheckConfiguration(
```

```
            misspelledSelectionColor:  Colors.red),
          ),
        ),
        const SizedBox(height: 20,),
        Container(
          margin: const EdgeInsets.symmetric(horizontal: 20),
          padding: const EdgeInsets.symmetric(horizontal: 10),
          decoration: BoxDecoration(
            border: Border.all(color: Colors.black, width: 1.5),
        ),
          child: const TextField(
            obscureText: true,
            decoration: InputDecoration(
            hintText: "Password",
            ),
          ),
        ),
        const SizedBox(height: 30,),
        Container(
          height: 50,
          width: 350,
          child: OutlinedButton(
            onPressed: () {
            print('Button Passed');
            },
            style: ButtonStyle(
              foregroundColor: MaterialStateProperty.all(Colors.black87),
              backgroundColor: MaterialStateProperty.all(Colors.red),
            ),
            child: const Text("Login",
            style: TextStyle(fontSize: 20),),
          ),
        )
      ],
    ),
  );
 }
}
```

Output:



Practical 6: Create and application with Flutter UI Components.

main.dart:

```
import 'package:flutter/material.dart';
import 'signup.dart';

void main() {
 runApp(MaterialApp(
  debugShowCheckedModeBanner: false,
  home:Scaffold(
   appBar: AppBar(
    title: const Text("Practical - 6"),
    backgroundColor: Colors.red,
    foregroundColor: Colors.black87,
   ),

   body: const SignUpPage(),
  ),
 ),
 );
}
```

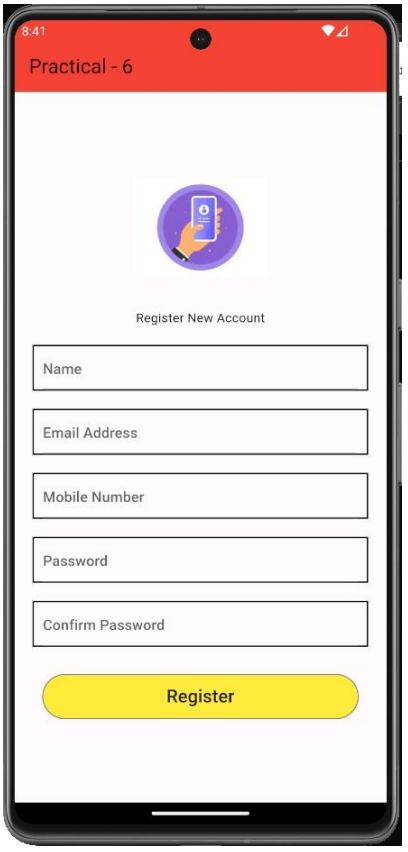
signup.dart:

```
import 'package:flutter/material.dart';
import 'package:flutter/services.dart';

class SignUpPage extends StatelessWidget {
 const SignUpPage({super.key});

 @override
 Widget build(BuildContext context) {
  return SingleChildScrollView(
  child: Column(
     children: [
      const SizedBox(height: 75,),
      Container(
       height: 150,
       width: 150,
       child: Image.asset("assets/images/signup.jpeg"),
      ),
      const SizedBox(height: 15,),
      const Text("Register New Account",),
      const SizedBox(height: 20),
      Container(
       margin: const EdgeInsets.symmetric(horizontal: 20),
       padding: const EdgeInsets.symmetric(horizontal: 10),
       decoration: BoxDecoration(
        border: Border.all(color: Colors.black, width: 1.5),),
       child: const TextField(
        decoration: InputDecoration(
         hintText: "Name",),
        spellCheckConfiguration: SpellCheckConfiguration(
         misspelledSelectionColor: Colors.red), ),),
      const SizedBox(height: 20,),
```

```
Container(
  margin: const EdgeInsets.symmetric(horizontal: 20),
  padding: const EdgeInsets.symmetric(horizontal: 10),
  decoration: BoxDecoration(
    border: Border.all(color: Colors.black, width: 1.5),
  ),
  child: const TextField(
    decoration: InputDecoration(
    hintText: "Email Address",
    ),
    spellCheckConfiguration: SpellCheckConfiguration(
        misspelledSelectionColor: Colors.red),
  ),
),
const SizedBox(height: 20,),
Container(
  margin: const EdgeInsets.symmetric(horizontal: 20),
  padding: const EdgeInsets.symmetric(horizontal: 10),
  decoration: BoxDecoration(
    border: Border.all(color: Colors.black, width: 1.5),
  ),
  child: TextField(
    keyboardType: TextInputType.number,
    inputFormatters: [
    FilteringTextInputFormatter.digitsOnly,
    ],
    decoration: InputDecoration(
      hintText: "Mobile Number",
    ),
    spellCheckConfiguration: SpellCheckConfiguration(
        misspelledSelectionColor: Colors.red),
  ),
),
const SizedBox(height: 20,),
Container(
  margin: const EdgeInsets.symmetric(horizontal: 20),
  padding: const EdgeInsets.symmetric(horizontal: 10),
  decoration: BoxDecoration(
    border: Border.all(color: Colors.black, width: 1.5),
  ),
  child: const TextField(
    obscureText: true,
    decoration: InputDecoration(
    hintText: "Password",
    ),
    spellCheckConfiguration: SpellCheckConfiguration(
        misspelledSelectionColor: Colors.red),
  ),
),
const SizedBox(height: 20,),
Container(
  margin: const EdgeInsets.symmetric(horizontal: 20),
  padding: const EdgeInsets.symmetric(horizontal: 10),
  decoration: BoxDecoration(
    border: Border.all(color: Colors.black, width: 1.5),
  ),
```

```
            child: const TextField(
              obscureText: true,
              decoration: InputDecoration(
                hintText: "Confirm Password",
              ),
              spellCheckConfiguration: SpellCheckConfiguration(
                  misspelledSelectionColor: Colors.red),
            ),
          ),
          const SizedBox(height: 30,),
          Container(
            height: 50,
            width: 350,
            child: OutlinedButton(
              onPressed: () {
              print('Button Passed');
              },
              style: ButtonStyle(
                foregroundColor: MaterialStateProperty.all(Colors.black87),
              backgroundColor: MaterialStateProperty.all(Colors.yellow), ),
              child: const Text("Register",
                style: TextStyle(fontSize: 20),),),
          )
        ],
      ),
    );
  }
}
```

Output:



Practical 7: Create and application with Navigation in Flutter.

main.dart:

```
import 'package:flutter/material.dart';
import 'login.dart';

void main() {
 runApp(MaterialApp(
  debugShowCheckedModeBanner: false,
  home:Scaffold(
   appBar: AppBar(
    title: const Text("Practical - 7"),
    foregroundColor: Colors.black87,
   ),

   body:  LoginPage(),
  ),
 ),
 );
}
```

login.dart:

```
import 'package:flutter/material.dart';
import 'package:practical7/custom_geasture.dart';
import 'package:practical7/forpass.dart';
import 'package:practical7/signup.dart';

class LoginPage extends StatelessWidget {

LoginPage({super.key});

 final TextEditingController usernameController = TextEditingController();
 final TextEditingController passwordController = TextEditingController();

 @override
 Widget build(BuildContext context) {
  return MaterialApp(
  debugShowCheckedModeBanner: false,
  home: Scaffold(
     body: Container(
      margin: const EdgeInsets.all(24),
      child: Column(
       mainAxisAlignment: MainAxisAlignment.spaceEvenly,
       children: [
        _header(context),
        _inputField(context),
        _forgotPassword(context),
        _signup(context),
       ],
      ),
     ),
   ),
  );
 }
```

```
_header(context) {
  return const Column(
  children: [
      Text(
        "Welcome Back",
        style: TextStyle(fontSize: 40, fontWeight: FontWeight.bold),
      ),
      Text("Enter your credential to login"),
    ],
  );
}

_inputField(context) {
  return Column(
    crossAxisAlignment: CrossAxisAlignment.stretch,
    children: [
      TextFormField(
        controller: usernameController,
        decoration: InputDecoration(
            hintText: "Username",
            border: OutlineInputBorder(
                borderRadius: BorderRadius.circular(18),
                borderSide: BorderSide.none
            ),
            fillColor: Colors.purple.withOpacity(0.1),
            filled: true,
            prefixIcon: const Icon(Icons.person)),
        validator: (value) {
          if (value!.isEmpty) {
            return 'Please enter your username';
          }
          return null;
        },
      ),
      const SizedBox(height: 10),
      TextFormField(
        controller: passwordController,
        decoration: InputDecoration(
        hintText: "Password",
          border: OutlineInputBorder(
              borderRadius: BorderRadius.circular(18),
              borderSide: BorderSide.none),
          fillColor: Colors.purple.withOpacity(0.1),
          filled: true,
          prefixIcon: const Icon(Icons.password),
        ),
        obscureText: true,
        validator: (value) {
          if (value!.isEmpty) {
            return 'Please enter your password';
          }
          return null;
        },
      ),
      const SizedBox(height: 10),
      ElevatedButton(
```

```
        onPressed: () {
          if (usernameController.text == 'admin' &&
              passwordController.text == 'admin123!@#') {
            Navigator.push(context, MaterialPageRoute(builder: (context)=> const custom_geasture()));
            print('Login Successful');
          } else {
            print('Invalid Credentials');
          }
        },
        style: ElevatedButton.styleFrom(
          shape: const StadiumBorder(),
          padding: const EdgeInsets.symmetric(vertical: 16),
          backgroundColor: Colors.purple,
        ),
        child: const Text(
          "Login",
          style: TextStyle(fontSize: 20, color: Colors.white),
        ),
      )
    ],
  );
}

_forgotPassword(context) {
  return TextButton(
  onPressed: () {
      Navigator.pushReplacement(context, MaterialPageRoute(builder: (context)=> const ForPassPage()));
    },
    child: const Text("Forgot password?",
      style: TextStyle(color: Colors.purple),
    ),
  );
}

_signup(context) {
  return Row(
    mainAxisAlignment: MainAxisAlignment.center,
    children: [
      const Text("Don't have an account? "),
      TextButton(
          onPressed: () {
            Navigator.push(context, MaterialPageRoute(builder: (context)=>  SignupPage()));
          },
          child: const Text("Sign Up", style: TextStyle(color: Colors.purple),)
      )
    ],
  );
 }
}
```

signup.dart:

```
import  'package:flutter/material.dart';
import 'package:flutter/services.dart';
import 'package:practical7/login.dart';

import 'custom_geasture.dart';

class SignupPage extends StatelessWidget {
  SignupPage({super.key});

  final TextEditingController emailController = TextEditingController();
  final TextEditingController usernameController = TextEditingController();
  final TextEditingController passwordController = TextEditingController();
  final TextEditingController conpasswordController = TextEditingController();
  final TextEditingController mobileController = TextEditingController();

  @override
  Widget build(BuildContext context) {

    return MaterialApp(
      debugShowCheckedModeBanner: false,
      home: Scaffold(
        body: SingleChildScrollView(
          child: Container(
            padding: const EdgeInsets.symmetric(horizontal: 40),
            height: MediaQuery.of(context).size.height - 50,
            width: double.infinity,
            child: Column(
              mainAxisAlignment: MainAxisAlignment.spaceEvenly,
              crossAxisAlignment: CrossAxisAlignment.stretch,
              children: <Widget>[
                Column(
                  children: <Widget>[
                    const SizedBox(height: 60.0),
                    const Text(
                      "Sign up",
                      style: TextStyle(
                        fontSize: 30,
                        fontWeight: FontWeight.bold,
                      ),
                    ),
                    const SizedBox(height: 20,),
                    Text(
                      "Create your account",
                      style: TextStyle(fontSize: 15, color: Colors.grey[700]),
                    )
                  ],
                ),
                Column(
                  children: <Widget>[
                    TextFormField(
```

```
  decoration: InputDecoration(
     hintText: "Username",
     border: OutlineInputBorder(
        borderRadius: BorderRadius.circular(18),
        borderSide: BorderSide.none),
     fillColor: Colors.purple.withOpacity(0.1),
     filled: true,
     prefixIcon: const Icon(Icons.person)),
  validator: (value) {
   if (value!.isEmpty) {
     return 'Please enter your username';
   }
   return null;
  },
),
const SizedBox(height: 20),
TextFormField(
  controller: emailController,
  decoration: InputDecoration(
     hintText: "Email",
     border: OutlineInputBorder(
        borderRadius: BorderRadius.circular(18),
        borderSide: BorderSide.none),
     fillColor: Colors.purple.withOpacity(0.1),
     filled: true,
     prefixIcon: const Icon(Icons.email)),
  validator: (value) {
   if (value!.isEmpty) {
     return 'Please enter your email address';
   }
   return null;
  },
),
const SizedBox(height: 20),
TextFormField(
  controller: mobileController,
  decoration: InputDecoration(
     hintText: "Mobile",
     border: OutlineInputBorder(
        borderRadius: BorderRadius.circular(18),
        borderSide: BorderSide.none),
     fillColor: Colors.purple.withOpacity(0.1),
     filled: true,
     prefixIcon: const Icon(Icons.person)),
  keyboardType: TextInputType.number,
  inputFormatters: <TextInputFormatter>[
  FilteringTextInputFormatter.digitsOnly
  ],
  validator: (value) {
   if (value!.isEmpty) {
     return 'Please enter your Mobile Number';
```

```
        }
        return null;
      },
    ),
    const SizedBox(height: 20),
    TextFormField(
      controller: passwordController,
      decoration: InputDecoration(
      hintText: "Password",
        border: OutlineInputBorder(
            borderRadius: BorderRadius.circular(18),
            borderSide: BorderSide.none),
        fillColor: Colors.purple.withOpacity(0.1),
        filled: true,
        prefixIcon: const Icon(Icons.password),
      ),
      obscureText: true,
      validator: (value) {
        if (value!.isEmpty) {
          return 'Please enter your password';
        }
        return null;
      },
    ),
    const SizedBox(height: 20),
    TextFormField(
      controller: conpasswordController,
      decoration: InputDecoration(
      hintText: "Confirm Password",
      border: OutlineInputBorder(
            borderRadius: BorderRadius.circular(18),
            borderSide: BorderSide.none),
        fillColor: Colors.purple.withOpacity(0.1),
        filled: true,
        prefixIcon: const Icon(Icons.password),
      ),
      obscureText: true,
      validator: (value) {
        if(value != passwordController.text)
        return "Password Doesn't Match";
        if (value!.isEmpty) {
          return 'Please enter your password';
        }
        return null;
      },
    ),
  ],
),
Container(
    padding: const EdgeInsets.only(top: 3, left: 3),
    child: ElevatedButton(
```

```
                onPressed: () {
                  if (emailController.text == 'admin@gmail.com' &&
                      passwordController.text == 'admin123!@#') {
                    Navigator.pushReplacement(context, MaterialPageRoute(builder: (context)=> const
custom_geasture()));
                    print('Login Successful');
                  } else {
                    print('Invalid Credentials');
                  }
                },
                child: const Text(
                  "Sign up",
                  style: TextStyle(fontSize: 20, color: Colors.white),
                ),
                style: ElevatedButton.styleFrom(
                  shape: const StadiumBorder(),
                  padding: const EdgeInsets.symmetric(vertical: 16),
                  backgroundColor: Colors.purple,
                ),
              )
            ),
            Row(
              mainAxisAlignment: MainAxisAlignment.center,
              children: <Widget>[
                const Text("Already have an account?"),
                TextButton(
                    onPressed: () {
                      Navigator.push(context, MaterialPageRoute(builder: (context)=> LoginPage()));
                    },
                    child: const Text("Login", style: TextStyle(color: Colors.purple),)
                )
              ],
            )
          ],
        ),
      ),
    ),
  );
 }
}
```

forpass.dart:

```
import 'package:flutter/material.dart';
import 'login.dart';

class ForPassPage extends StatelessWidget {
  const ForPassPage({super.key});

  @override
  Widget build(BuildContext context) {
```

```
  return MaterialApp(
    debugShowCheckedModeBanner: false,
    home: Scaffold(
      body: Container(
        margin: const EdgeInsets.all(24),
        child: Column(
          mainAxisAlignment: MainAxisAlignment.spaceEvenly,
          children: [
            _header(context),
            _inputField(context),
          ],
        ),
      ),
    ),
  );
}

_header(context) {
  return const Column(
  children: [
      Text(
        "Reset Your Password",
        style: TextStyle(fontSize: 40, fontWeight: FontWeight.bold),
      ),
    ],
  );
}

_inputField(context) {
  return Column(
    crossAxisAlignment: CrossAxisAlignment.stretch,
    children: [
      TextField(
        decoration:   InputDecoration(
            hintText: "Email  Address",
            border: OutlineInputBorder(
              borderRadius: BorderRadius.circular(18),
              borderSide: BorderSide.none
            ),
            fillColor: Colors.purple.withOpacity(0.1),
            filled: true,
            prefixIcon: const Icon(Icons.person)),
      ),
      const SizedBox(height: 10),
      ElevatedButton(
        onPressed: () {
          Navigator.push(context, MaterialPageRoute(builder: (context)=> LoginPage()));
        },
        style: ElevatedButton.styleFrom(
          shape: const StadiumBorder(),
          padding: const EdgeInsets.symmetric(vertical: 16),
```

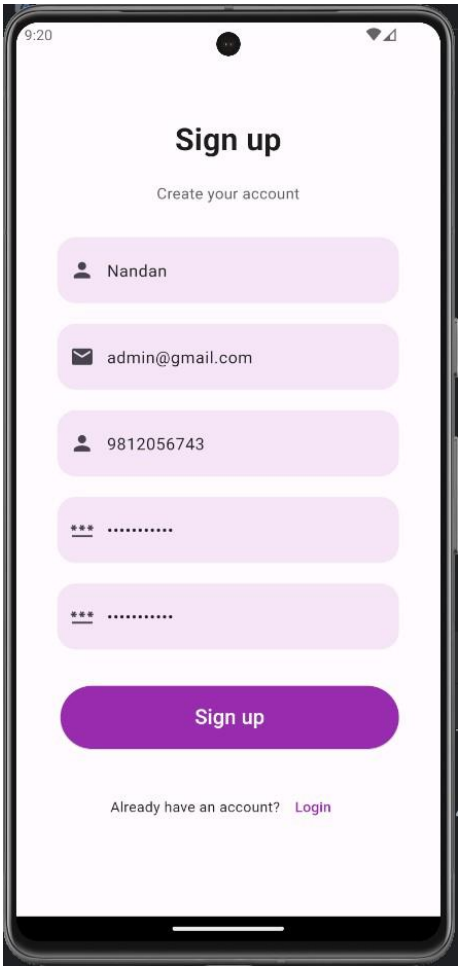
```
            backgroundColor: Colors.purple,
          ),
          child: const Text(
            "Reset Password",
            style: TextStyle(fontSize: 20, color: Colors.white),
          ),
        )
      ],
    );
  }
}
```

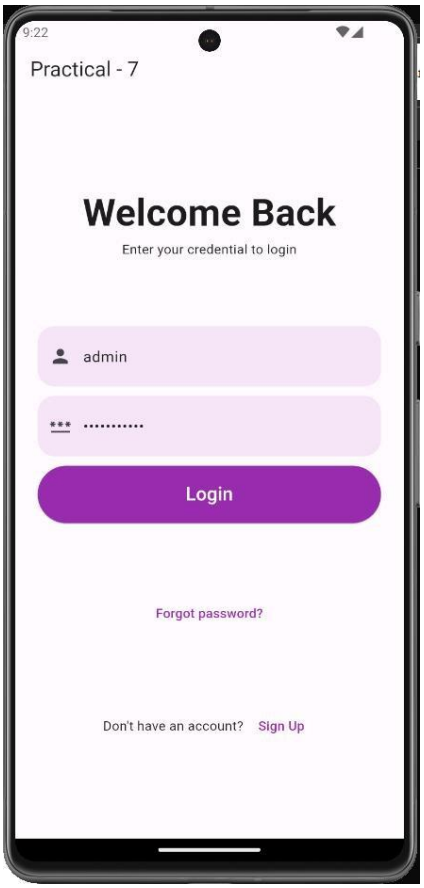
custom_geasture.dart:

```
import 'package:flutter/material.dart';

class custom_geasture extends StatefulWidget {
  const custom_geasture({super.key});

  @override
  State<custom_geasture> createState() => _custom_geastureState();
}

class _custom_geastureState extends State<custom_geasture> {

  Color color1=Colors.orange;
  String displayText = 'Orange';
  IconData icn = Icons.temple_hindu_outlined;

  @override
  Widget build(BuildContext context) {

    return Scaffold(
      appBar: AppBar(
      centerTitle: true,
        title: Text("Custom Geasture"),
      ),
      body: GestureDetector(
        onTap: () {
          setState(() {
            if(color1==Colors.orange) {
            color1 = Colors.blue;
            displayText = 'Blue';
              icn = Icons.radar;
            }else if(color1==Colors.blue){
              color1=Colors.green;
              displayText = 'Green';
              icn = Icons.add_business;}
            else{
            color1=Colors.orange;
            displayText = 'Orange';
              icn = Icons.temple_hindu_rounded;
            }
```

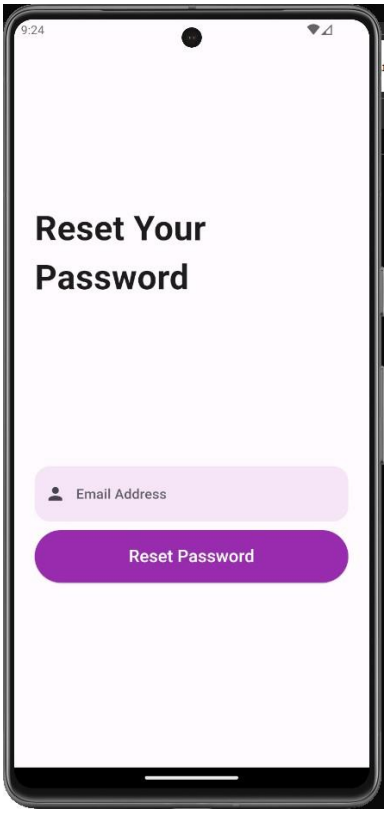
```
          });
        },
        child: Center(
          child: Container(
          height: 1000,
            width: 1000,
            color: color1,
            child: Center(
            child: Column(
               mainAxisAlignment: MainAxisAlignment.center,
               children: [
                Icon(
                icn,
                size: 50,
                color: Colors.white,),
                Text(displayText,
                style: TextStyle(
                fontSize: 50,
                  color: Colors.white,
                ),),
                Container(

                )
              ],
            ),
          ),
        ),
      ),
    );
  }
}
```

Output:




9:22
Practical - 7
Welcome Back
Enter your credential to login
admin
Login
Forgot password?
Don't have an account? Sign Up

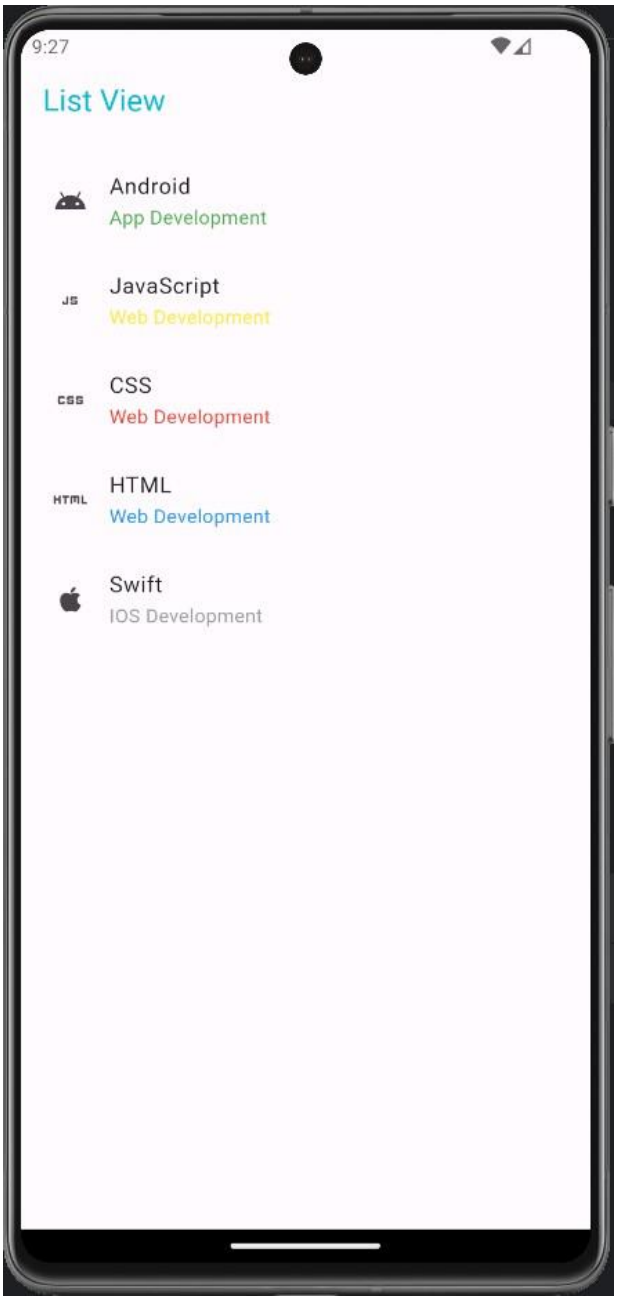

9:23
Custom Geasture
Blue


9:24
Reset Your Password
Email Address
Reset Password

Practical 8: Create and application with list view in Flutter.

```
import 'package:flutter/material.dart';

void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({super.key});

  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
    debugShowCheckedModeBanner: false,
    home: Scaffold(
        appBar: AppBar(
          title: Text('List View', style: TextStyle(color: Colors.cyan),),
        ),
        body: Center(
          child: Container(
          child: ListView(
              padding: const EdgeInsets.all(8),
              children: <Widget>[
                ListTile(
                  leading: Icon(Icons.android),
                  title: Text('Android'),
                  subtitle: Text("App Development", style: TextStyle(color: Colors.green),),
                ),
                ListTile(
                  leading: Icon(Icons.javascript),
                  title: Text('JavaScript'),
                  subtitle: Text("Web Development", style: TextStyle(color: Colors.yellow),),
                ),ListTile(
                  leading: Icon(Icons.css),
                  title: Text('CSS'),
                  subtitle: Text("Web Development", style: TextStyle(color: Colors.red),),
                ),ListTile(
                  leading: Icon(Icons.html),
                  title: Text('HTML'),
                  subtitle: Text("Web Development", style: TextStyle(color: Colors.blue),),
                ),
                ListTile(
                  leading: Icon(Icons.apple),
                  title: Text('Swift'),
                  subtitle: Text("IOS Development", style: TextStyle(color: Colors.grey),),
                ),
              ],
            ),
          ),
        ),
      ),
    );
  }
}
```

Output:


9:27
List View
Android
App Development
JavaScript
Web Development
CSS
Web Development
HTML
Web Development
Swift
IOS Development

Practical 9: Create and application with grid view in Flutter.

```
import 'package:flutter/material.dart';

void main() {
 runApp(MyApp());}
class MyApp extends StatelessWidget {
 @override
 Widget build(BuildContext context) {
  return MaterialApp(
   home: Scaffold(
    appBar: AppBar(
     title: Text("Grid View"),
    ),
    body: Container(
     padding: EdgeInsets.all(12.0),
     child: GridView.count(
     crossAxisCount: 2,
      crossAxisSpacing: 10.0,
      mainAxisSpacing: 10.0,
      shrinkWrap: true,
      children: List.generate(10, (index) {
       return Padding(
        padding: const EdgeInsets.all(10.0),
        child: Container(
         alignment: Alignment.center,
         decoration: BoxDecoration(
         color: Colors.lightGreenAccent,
          borderRadius: BorderRadius.circular(12.0),
         ),
         child: Text('Item $index',
          style: TextStyle(fontSize: 20, color: Colors.black87),),),
       );
      }),
    ),  ),  ),
  );
 }
}
```

Output: